#### ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

E-mail: hq@eppo.int

Web: www.eppo.int

# EPPO Reporting Service

### No. 07 Paris, 2012-07-01

CONTENTS	
2012/138	- First report of Curtobacterium flaccumfaciens pv. flaccumfaciens on soybean in Germany
2012/139	- Ralstonia solanacearum detected on Pelargonium in Germany
2012/140	- Update on the situation of <i>Phytophthora austrocedrae</i> in the United Kingdom
2012/141	- First report of <i>Dryocosmus kuriphilus</i> in the Czech Republic
2012/142	- Dryocosmus kuriphilus found in Ile-de-France region (FR)
2012/143	- First report of <i>Ips cembrae</i> in Sweden
2012/144	- Update on the situation of <i>Drosophila suzukii</i> in Italy
2012/145	- Studies on <i>Drosophila suzukii</i> in Spain
2012/146	- Eradication of <i>Bemisia tabaci</i> in Finland
2012/147	- Addition of Thaumastocoris peregrinus to the EPPO Alert List
2012/148	- Swiss interception of Anoplophora glabripennis on wood packaging material from China
2012/149	- Quarantine lists of Uzbekistan (2008)
2012/150	- A new web-based tool to spread information on pests and diseases
	Invasive Plants
<u>2012/151</u>	- Eradication programme against Cylindropuntia rosea on the shores of Salagou lake (FR)
2012/152	- Management of <i>Lagarosiphon major</i> in the Salagou lake (FR)
2012/153	- First report of <i>Egeria densa</i> in the Guadalquivir watershed (ES)
2012/154	- First report of Colocasia esculenta in the wild in mainland Spain
2012/155	- A LIFE project to manage Baccharis halimifolia in the País Vasco (ES)
2012/156	- Code of practice on non-native species approved by the Scottish Government
2012/157	- The economic cost of invasive alien species in Great Britain
2012/158	- Publication of the proceedings of the 25 <sup>th</sup> German Conference on Weed Biology and Weed Control
<u>2012/159</u>	- A new web-based tool to spread information on invasive alien plants

Tel: 33 1 45 20 77 94

Fax: 33 1 70 76 65 47

### 2012/138 First report of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* on soybean in Germany

During breeding trials on soybean (*Glycine max*), the presence of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* (EPPO A2 List) was detected for the first time in Germany. Field trials with 16 different soybean cultivars were conducted in one site near Dornburg (Thüringen). In July 2011 severe symptoms of bacterial blight resembling those caused by *Pseudomonas syringae* pv. *glycinea* were observed on several cultivars (cvs 'Maple Arrow', 'Lissabon', 'Alma ATA', 'Primus' and 'Capnor'), but the cultivar Capnor also showed some atypical symptoms. Laboratory studies (isolation, PCR, sequencing, pathogenicity tests) confirmed the presence of *P. syringae* pv. *glycinea* on all cultivars listed above and of *C. flaccumfaciens* pv. *flaccumfaciens* in samples of *G. max* cv. 'Capnor'. This is the first time that *C. flaccumfaciens* pv. *flaccumfaciens* is reported in field-grown soybean plants in Germany. The origin of the bacterium is not known, but it is suspected that it was introduced via infected seeds of cv. 'Capnor'. All infected soybean plants have been destroyed.

The situation of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* in Germany can be described as follows: Transient, first found in 2011 in 1 site near Dornburg (Thüringen) in 1 soybean cultivar.

Source:

Sammer UF, Reiher K (2012) *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* on soybean in Germany - a threat for farming. *Journal of Phytopathology* **160**(6), 314-316.

ProMed posting (no. 20120809.1235745) of 2012-08-09. Curtobacterium wilt, soybean - Germany: first report, (Thuringia). http://www.promedmail.org

Additional key words: new record Computer codes: CORBFL, DE

#### 2012/139 Ralstonia solanacearum detected on Pelargonium in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the detection of *Ralstonia solanacearum* (EPPO A2 List) on *Pelargonium* plants in Rheinland-Pfalz. In March 2012, 15 potted plants of *Pelargonium zonale* cvs 'Trend Red' and 'Salmon' produced for final consumers were found to be infested by *R. solanacearum* in one nursery. The infested plants showed wilting symptoms. The pathogen was isolated from these plants and identified by the official laboratory of the regional plant protection service. The tests performed included selective plating on SMSA, IF, PCR, and pathogenicity tests in tomato plants. The determination of the race and pathovar was done by JKI (Institute for National and International Plant Health) and the isolated culture was identified as *R. solanacearum* race 3 pathovar 2. The diseased plants belonged to a lot of 500 plants. Young plants had been delivered from another nursery which had originally bought cuttings from a supplier in a third country. Tracing back investigations are ongoing but until now the source of this infestation remains unknown. The entire lot concerned has been destroyed and sanitary measures taken in the nursery.

The pest status of *Ralstonia solanacearum* in Germany is officially declared as: **Present**, few occurrences, under eradication.

Source: NPPO of Germany (2012-06).

Additional key words: detailed record Computer codes: RALSSO, DE

### 2012/140 Update on the situation of *Phytophthora austrocedrae* in the United Kingdom

In the United Kingdom, the presence of *Phytophthora austrocedrae* was first detected in 2011 on *Chamaecyparis nootkatensis* and *C. lawsoniana* in a park in Scotland (East Renfrewshire, EPPO RS 2011/135). The pathogen was later found on *Juniperus communis* in northern England, in the Upper Teesdale National Nature Reserve (EPPO RS 2012/057). In 2012, the following new detections of *P. austrocedrae* on *J. communis* were made:

- on 7 trees in a heathland site in Perth and Kinross (Scotland)
- on 1 tree a private garden in Devon (South West England)
- at 3 different sites in Cumbria (North West England) in the natural environment, infection covering an area of approximately 14.5 ha (100% infection), 40 ha (10% infection), 70 ha (5% infection), respectively
- in a lot of 15 000 plants in a nursery in Cumbria (it was estimated that 5% of the plants were infected)
- 13 plants in a nursery in Devon.

In addition, investigations have been carried out at 1 site (100 ha) at Glen Artney (Scotland), on a dieback condition which has been affecting junipers for a rather long period (first noted prior to 2004). These ongoing investigations have revealed numerous juniper bushes showing symptoms of dieback apparently associated with lower stem and root necrosis. Laboratory analysis (isolation, molecular tests) confirmed the presence of *P. austrocedrae* in diseased plants. The ITS sequences obtained were similar to those from junipers in the Upper Teesdale Nature Reserve and those reported from Scotland in 2011 on *C. nootokatensis* and *C. lawsoniana*. Phytosanitary measures are being taken in the United Kingdom to contain the disease in the natural environment. In affected nurseries, as well as in the private garden, all infected material has been destroyed.

The pest status of *Phytophthora austrocedrae* in the United Kingdom is officially declared as: **Present in some areas, subject to official control.** 

**Source:** NPPO of the United Kingdom (2012-05).

Additional key words: detailed record Computer codes: PHYTAU, GB

#### 2012/141 First report of *Dryocosmus kuriphilus* in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first record of *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae - EPPO A2 List) on its territory. In 2012-05-21, galls of *D. kuriphilus* (without exit holes) were observed on 2 chestnut trees (*Castanea sativa* cv. 'Marrone di Marradi') by the owner of a garden located in Kunice (Prague-East district, Central Bohemian region). This finding was confirmed by the Czech NPPO and both trees were destroyed on 2012-05-23. Tracing-back studies showed that these 2 infested trees had been produced at one Italian company and delivered via Slovakia to the Czech Republic. In addition, it was found that these 2 infested trees belonged to 1 of 3 consignments (comprising in total 50 possibly infested chestnut trees) also originating from the same Italian company and delivered via Slovakia. Further investigations showed that in addition to the 2 infested trees found in Kunice, 46 other potentially infested trees were traced forward to the following localities:

- Central Bohemian region: Mladà Boleslay, Beroun, Prague-East, and Prague West districts.
- Hradec Králové region: Jičin district
- Pardubice region: Svitavy district
- Plzeň region: Plzeň district.

All galls observed did not show exit holes. Of the 50 trees, 2 had been sold to private persons and therefore could not be traced.

Following these initial records, *D. kuriphilus* was also detected on 2012-07-12 in a garden centre in Čáslav (district of Kutná Hora, Central Bohemian region) during an official survey. The pest was found in 3 pot plants of *C. sativa* of 3 m height. Numerous galls were present, adults (females) had already been developing inside the galls and exit holes were found in few of them (up to 10%). These plants were part of a consignment (containing 9 plants) delivered by an Italian nursery (Toscana) to the Czech garden centre in March 2012. Tracing forward studies showed that out of these 9 plants: i) 5 were kept in the garden centre in Čáslav but 2 were sold to final consumers, ii) 4 had been sent to another garden centre of the same company in the city of Brno (South Moravian region) and all were sold to final consumers. Therefore, these sold plants could not be traced any further.

In all cases, infested trees were destroyed and phytosanitary measures were taken in accordance with the Commission Decision 2006/464/EC. A regional information campaign is also being conducted by the Czech NPPO.

The pest status of *Dryocosmus kuriphilus* in Czech Republic is officially declared as: **Transient, under eradication.** 

Source: NPPO of Czech Republic (2012-06 and 2012-07).

Additional key words: new record Computer codes: DRYCKU, CZ

#### 2012/142 Dryocosmus kuriphilus found in Ile-de-France region (FR)

The NPPO of France recently informed the EPPO Secretariat of the first record of Dryocosmus kuriphilus (Hymenoptera: Cynipidae - EPPO A2 List) in the Ile-de-France region. In May and June 2012, members of the general public reported the presence of numerous galls on chestnut trees (Castanea spp.) in gardens and forest stands (7 sites in total, in the departments of Essonne, Yvelines, and Val-d'Oise). Samples were collected from 2 sites and sent to the official laboratory which confirmed the identity of the pest. On these samples, only larvae and pupae were found and no exit holes were observed on the galls. Investigations carried out in forest stands showed that the severity of infestation varied from low to 10 % of infested trees (with 10% of the leaves being infested). Surveys are being carried out in all new forest plantations, as well as in all nurseries and gardens centres of Ile-de-France. No further records were made. The origin of this infestation is unknown. Phytosanitary measures will be taken in accordance with the EU Commission Decision 2006/464/EC. Until now, D. kuriphilus has been found in the following regions of France: Aquitaine (Dordogne, Gironde), Corse (Haute-Corse), Centre (Indre-et-Loire), Ilede-France (Essonne, Yvelines, and Val-d'Oise), Languedoc-Roussillon (Hérault), Midi-Pyrénées (Lot), Rhône-Alpes (Ain, Ardèche, Drôme, Haute-Savoie, Savoie), Provence-Alpes-Côte d'Azur (Alpes-Maritimes, Rhône, Var).

The pest status of *Dryocosmus kuriphilus* in France is officially declared as: **Present**, restricted distribution.

Source: NPPO of France (2012-06).

Additional key words: detailed record Computer codes: DRYCKU, FR

#### 2012/143 First report of *lps cembrae* in Sweden

The NPPO of Sweden recently informed the EPPO Secretariat of the first record of *Ips cembrae* (Coleoptera: Scolytidae - EU Annexes) on its territory. This insect was detected and identified in the South of Sweden by the Swedish University of Agricultural Sciences. The distribution of *I. cembrae* is currently being investigated by deploying pheromone traps in forests which are mainly dominated by larch species (*Larix* spp.) in the South of Sweden.

The situation of *Ips cembrae* in Sweden can be described as follows: **Present**, **first found** in 2012 in Southern Sweden.

Source: NPPO of Sweden (2012-06).

Additional key words: first record Computer codes: IPSXCE, SE

#### 2012/144 Update on the situation of *Drosophila suzukii* in Italy

The NPPO of Italy recently informed the EPPO Secretariat that, as a result of monitoring activities, the presence of *Drosophila suzukii* (Diptera: Drosophila - EPPO A2 List) has been reported from new areas in the following regions: Liguria, Marche, Sicilia, Valle d'Aosta, and Veneto. Specimens of *D. suzukii* were caught in traps located near places of intense trade flows of plants and plant products, and in cultivated areas. The pest was found in small fruit crops (raspberry, strawberry), orchards (cherry, peach), vineyards, and hedges of *Prunus* spp.

The situation of *Drosophila suzukii* in Italy can be described as follows: **Present**, first found in 2009 in the province of Trento, now recorded in several regions (Campania, Liguria, Lombardia, Marche, Piemonte, Sicilia, Trentino-Alto Adige, Toscana, Valle d'Aosta, Veneto).

Source: NPPO of Italy (2012-07).

Additional key words: detailed record Computer codes: DROSSU, IT

#### 2012/145 Studies on *Drosophila suzukii* in Spain

In Spain, *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) was first found in Rasquera (near Tarragona, Cataluña) during autumn 2008 (EPPO RS 2010/007). Trapping studies carried out in Cataluña showed that *D. suzukii* could be found in 15 localities (out of 26 studied) and in 36 localities (out of 59) in 2010 and 2011, respectively. Damage was first confirmed in 2011 in 6 localities in the province of Barcelona on cherries and strawberries, and to a lesser extent on plums, figs and peaches. In autumn 2011, further studies were conducted on the host fruit of *D. suzukii*, and on its potential natural enemies. Samples of 18 plant species including fruit crops, forest and garden plants were collected. Infestations were found in strawberries and raspberries (known hosts of *D. suzukii*), as well as in fruits of *Solanum luteum* (weed) and *Arbutus unedo* (common shrub in Mediterranean forests and gardens). Both *S. luteum* and *A. unedo* were not previously recorded as host fruit of *D. suzukii*, but they may play a role in maintaining pest populations in the uncultivated environment. During these studies, several insects which might act as parasitoids have been collected and are under identification. Several predators, *Orius laevigatus*, *Cardiasthetus fasciventris*, *C. nazarenus* (Hemiptera:

Anthocoridae), and *Dicyphus tamaninii* (Hemiptera: Miridae) were also collected. However, more research is needed to determine the potential of these natural enemies in controlling *D. suzukii*.

Source: Gabarra R, Arno J, riudavets J (2012) Primeros resultados sobre *Drosophila suzukii*:

huéspedes, suceptibilidad de los frutos y enemigos naturales. Phytoma-España no.

240, 46-52.

Additional key words: detailed record, host plant Computer codes: DROSSU, ES

#### 2012/146 Eradication of Bemisia tabaci in Finland

In Finland, *Bemisia tabaci* (Hemiptera: Aleyrodidae - EPPO A2 List) is reported occasionally on glasshouse crops (mainly on poinsettias - *Euphorbia pulcherrima*) where it is introduced via imported plant material. When the pest is detected, it is subject to eradication measures to prevent its establishment. *B. tabaci* was found several times (35) in 31 different production sites in 2011, and once in spring 2012 (EPPO RS 2011/203, 2012/096). 23 of these 36 outbreaks were found in poinsettia production, and the rest in bedding or pot plant production. In all cases, growers have applied appropriate treatments and quarantine measures to eradicate the pest. Heavily infested lots have been destroyed and insecticides have been applied. As *B. tabaci* is no longer found in these production sites, the NPPO of Finland considers that it has been eradicated.

The pest status of *Bemisia tabaci* in Finland is officially declared as: **Absent**, **pest eradicated**.

Source: NPPO of Finland (2012-06).

Additional key words: absence, eradication Computer codes: BEMITA, FI

#### 2012/147 Addition of Thaumastocoris peregrinus to the EPPO Alert List

Thaumastocoris peregrinus (Hemiptera: Thaumastocoridae) is a pest of eucalyptus. Originating from Australia, it has been introduced into South Africa and South America during the last decade where it is causing damage to eucalyptus plantations. More recently, *T. peregrinus* has been detected in other countries in Africa (Malawi, Zimbabwe, and Kenya), in Italy (2011), and in New Zealand (2012). In Italy, heavy infestations of *T. peregrinus* were first noticed in September 2011 on several *Eucalyptus* species (*E. camaldulensis*, *E. gomphocephala*, *E. bridgesiana*, *E. camaldulensis* x *E. biscostata*, *E. camaldulensis* x *E. grandis*) in Roma (Lazio region). In New Zealand, the pest was first found in March 2012 on *E. nicholii* during a routine survey in East Tamaki, Auckland and it is considered to be established in this area. Surveys are continuing in New Zealand to determine the extent of the infestation. Considering the invasive behaviour of this insect and its potential damage to eucalyptus trees, the EPPO Secretariat decided to add *T. peregrinus* to the Alert List.

#### Thaumastocoris peregrinus (Hemiptera: Thaumastocoridae) - Bronze bug

Why

Thaumastocoris peregrinus is native to Australia where it feeds on a wide range of Eucalyptus species. The insect has become a pest on Eucalyptus trees in Sydney (AU) where heavy infestations are found on street and garden trees. In 2003, T. peregrinus was first detected in South Africa and in 2005 in Argentina. It has since spread to Eucalyptus trees in Brazil, Uruguay, Chile, Paraguay, Malawi, Kenya, Zimbabwe, Italy and New Zealand. In some cases, heavy infestations have led to tree mortality. Considering the invasive behaviour of this insect and its potential damage to eucalyptus trees, the EPPO Secretariat added T. peregrinus to the Alert List.

Where

Originating from Australia, in the last decade it has spread to many other countries in different parts of the world.

EPPO region: Italy (first found in 2011, Lazio region).

Africa: Kenya, Malawi, South Africa, Zimbabwe.

**South America:** Argentina, Brazil (Bahia, Distrito Federal, Espirito Santo, Mato Grosso do Sul, Minas Gerais, Paraná, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo), Chile, Paraguay, Uruguay.

Oceania: Australia, New Zealand (first found in 2012 near Auckland).

On which plants

Eucalyptus species (including some Corymbia species, previously classified under Eucalyptus). T. peregrinus has been recorded on many eucalyptus species: Corymbia citriodora, C. henryi, C. maculata, E. argophloia, E. benthamii, E. botryoides, E. bridgesiana, E. camaldulensis, E. dorrigoensis, E. dunnii, E. globulus, E. gomphocephala, E. grandis, E. longirostrata, E. macarthuri, E. maidenii, E. nicholii, E. nitens, E. paniculata, E. pauciflora, E. punctata, E. robusta, E. saligna, E. scoparia, E. sideroxylon, E. smithii, E. tereticornis, E. urophylla, E. viminalis, as well as hybrids (e.g. E. camaldulensis x biscostata, E. grandis x camaldulensis, E. grandis x nitens, E. grandis x urophylla). Eucalyptus species present some variability in their susceptibility to the pest, and from the literature it seems that the most serious damage is observed on E. camaldulensis, E. nicholii, E. scoparia, E. tereticornis, and E. viminalis.

Damage

T. peregrinus feeds on Eucalyptus leaves causing leaf discoloration (bronzing, reddening, yellowing), early senescence and stunted growth. Heavy infestations can lead to severe defoliation, branch dieback, and eventually tree death. Severe damage has been observed on urban trees (E. scoparia and E. nicholii) in Sydney and tree mortality has been reported from South Africa and Brazil. However, studies about the economic impact could be not found. T. peregrinus is also considered as a nuisance, having been reported to 'sting' people in urban parks and playgrounds.

Adults are light brown with a flattened body (2-3.5 mm long). Eggs are dark, oval (0.5 mm long - 0.2 mm wide) with a sculptured chorion. They are laid singly or more often in clusters on leaves and twigs. *T. peregrinus* has 5 larval instars (or nymphs). All instars can be present on the same leaf. The life cycle is rather short, approximately 35 days (20 days at 17-20°C in laboratory conditions). A female can lay approximately 60 eggs during its lifespan (30 days).

View pictures: <a href="http://photos.eppo.org/index.php/album/584-thaumastocoris-peregrinus-thmcpe-">http://photos.eppo.org/index.php/album/584-thaumastocoris-peregrinus-thmcpe-</a>

Dissemination

Adults and nymphs are agile and can move rather quickly on the leaves. Data is lacking about the potential for natural spread of *T. peregrinus*. Over long distances, although the exact pathways of introduction remain unknown, *T. peregrinus* has shown a high potential for spread between continents. Studies on the invasion patterns of *T. peregrinus* in South Africa and South America have shown that 3 distinct introductions originating from the Sydney area occurred before 2005. These introductions coincide in time with the outbreaks in Sydney that have occurred regularly on urban *E. nicholli* and *E. scoparia* during the last decade. In Brazil, natural spread from neighbouring countries (Argentina and Uruguay) but also spread in association with international trade has probably taken place. In the state of Sao Paulo, it is suspected that the pest arrived via airplanes because it was found in eucalyptus trees near the international airports

of Viracopos/Campinas and of Guarulhos (near São Paulo city). The pest was found regularly near the main highways of São Paulo (possibly spread by trucks carrying eucalyptus logs with leaves and branches attached).

**Pathway** 

Possible risks

Plants for planting, cut branches, wood? (as a hitchhiker) from countries where *T. peregrinus* occurs.

In the Southern part of the EPPO region, eucalyptus trees are planted on a large scale for the production of wood, wood pulp, charcoal and biomass fuel. They are also largely used as ornamental trees in parks and gardens in many parts of the EPPO region. Control of *T. peregrinus* is difficult. Systemic insecticides (imidacloprid) applied as trunk injections have been found to be effective in controlling T. peregrinus in some urban trees near Sydney in Australia, but this approach cannot be used for large scale application in forest plantations or on large numbers of urban trees. Biological control methods are being investigated. Egg parasitoids (Clerochoides noackae, Stethynium sp. both Hymenoptera: Mymaridae) have been identified in Australia. In Brazil, several natural enemies have been reported, such as predators, Chrysoperla externa (Neuroptera: Chrysopidae), Atopozelus opsimus (Rhynchota: Reduviidae), entomopathogenic fungi (e.g. Beauveria bassiana). However, the efficacy of these potential biological agents remains to be demonstrated. Studies have identified a male aggregation pheromone but for the moment, the potential use of this compound for the management of T. peregrinus in eucalyptus plantations also needs to be further investigated. T. peregrinus is a serious pest of Eucalyptus species in the Southern Hemisphere and could become a forest and urban pest in Southern Europe and in the Mediterranean Basin. Finally, it should be underlined that *T. peregrinus* is now part of an already a long list of exotic pests of eucalyptus which have recently been introduced into the EPPO region (e.g. Blastospylla occidentalis, Ctenarytaina eucalypti, C. spatulata, Glycaspis brimblecombei, Ophelimus maskelli, Leptocybe invasa, Phoracantha recurva).

Carpintero DL, Dellapé PM (2006) A new species of *Thaumastocoris* Kirkaldy from Argentina (Heteroptera: Thaumastocoridae: Thaumastocorinae). *Zootaxa* no. 1228, 61-68.

González A, Calvo MV, Cal V, Hernández V, Doño F, Alves L, Gamenara D, Rossini C, Martínez G (2012) A male aggregation pheromone in the bronze bug, *Thaumastocoris peregrinus* (Thaumastocoridae). *Psyche*, 7 pp. doi:10.1155/2012/868474

Hurley B, Slippers B, Wingfield M (2011). *Thaumastocoris peregrinus* in Africa and South America. In: Supplement to the Montesclaros Declaration. IUFRO meeting (Montesclaros Monastery, ES, 2011-0523/27), p 21. <a href="http://www.iufro.org/science/divisions/division-7/70000/publications/montesclaros-declaration/">http://www.iufro.org/science/divisions/division-7/70000/publications/montesclaros-declaration/</a>

Ide M, Ruiz SG, Sandoval C, Valenzuela AEJ (2011) [Detection of *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae) associated to Eucalyptus spp. in Chile]. *Bosque* **32**(3), 309-313 (in Spanish).

Laudonia S, Sasso R (2012) First record of the bronze bug, *Thaumastocoris peregrinus* Carpintero & Dellapé (Heteroptera: Thaumastocoridae), a new exotic pest of *Eucalyptus* trees in Italy. <a href="http://www.eppo.int/QUARANTINE/special\_topics/Thaumastocoris\_peregrinus/Thaumastocoris\_peregrinus.htm">http://www.eppo.int/QUARANTINE/special\_topics/Thaumastocoris\_peregrinus/Thaumastocoris\_peregrinus.htm</a>

Laudonia S, Sasso R (2012) The bronze bug *Thaumastocoris peregrinus*: a new insect recorded in Italy, damaging to Eucalyptus trees. *Bulletin of Insectology* **65**(1), 89-93.

Martinez G, Bianchi M (2010) [First record in Uruguay of the bronze bug, *Thaumastocoris peregrinus* Carpintero and Dellapé, 2006 (Heteroptera: Thaumastocoridae)]. *Agrociencia* 14(1), 15-18 (in Spanish).

Martins CBC, Soldi RA, Barbosa LR, Aldrich JR, Zarbin PHG (2012) Volatile chemicals of adults and nymphs of the eucalyptus pest, *Thaumastocoris peregrinus* (Heteroptera: Thaumastocoridae). Psyche, 6 pp. doi:10.1155/2012/275128

Nadel RL, Slippers B, Scholes MC, Lawson SA, Noack AE, Wilcken CF, Bouvet JP, Wingfield MJ (2010) DNA bar-coding reveals source and patterns of *Thaumastocoris peregrinus* invasions in South Africa and South America. *Biological Invasions* 12, 1067-1077.

Nadel RL, Wingfield MJ, Scholes MC, Lawson SA, Noack AE, Neser S, Slippers B (2012) Mitochondrial DNA diversity of *Cleruchoides noackae* (Hymenoptera: Mymaridae): a potential biological control agent for *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae). *BioControl* 57(3), 397-404.

Noack AE, Coviella CE (2006) *Thaumastocoris australicus* Kirkaldy (Hemiptera: Thaumastocoridae): first record of this invasive pest of eucalyptus in the Americas. *General and Applied Entomology* **35**, 13-15.

Noack AE, Kaapro J, Bartimote-Aufflick K, Mansfield S, Rose HA (2009) Efficacy of imidacloprid in the control of *Thaumastocoris peregrinus* on *Eucalyptus scoparia* in Sydney, Australia. *Arboriculture & Urban Forestry* **35**(4), 192-196.

Noack AE, Rose HA (2007) Life-history of *Thausmatocoris peregrinus* and *Thaumastocoris* sp. in the laboratory with some observations on behaviour. *General and Applied Entomology* **36**, 27-33.

Sources

Queiroz DL (2009) Pragas exóticas e potenciais à eucaliptocultura no Brasil. Manejo Fitossanitário de Cultivos Agroenergéticos. Sociedade Brasileira de Fitopatologia, 239-249. <a href="http://www.celso-foelkel.com.br/artigos/outros/Pragas%20exoticas%20e%20potenciais%20a%20eucaliptocultura%20no%20Brasil.pdf">http://www.celso-foelkel.com.br/artigos/outros/Pragas%20exoticas%20e%20potenciais%20a%20eucaliptocultura%20no%20Brasil.pdf</a>

Ruiz de M SG, Sandoval C, Valenzuela AEJ (2011) [Detection of *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae) associated to *Eucalyptus* spp. in Chile]. *Bosque* **32**(3), 309-313 (in Spanish).

Soliman EP, Wilcken CF, Pereira JM, Dias TKR, Saché B, Dal Pogetto HFA, Barbosa LR (2012) Biology of Thaumastocoris peregrinus in different eucalyptus species and hybrids. Phytoparasitica 40(3), 223-230.

Sopow S, George S, Ward N (2012) Bronze bug, *Thaumastocoris peregrinus*: a new Eucalyptus pest in New Zealand. *Surveillance* **39**(2), 43-46.

Wilcken CF, Barbosa LR, Nogueira de Sá LA, Soliman EP, Coutinho Lima AV, Dal Pogetto MHFA, Ribeiro Dias TC (2011) Manejo de pragas exóticas em florestas de eucalipto. Proceeding of the II Encontro Braseileiro de Silvicultura (Campinas, BR, 2011-04-11/12), 129-134. http://www.alice.cnptia.embrapa.br/bitstream/doc/912870/4/LV4021p.129134.pdf

Wilcken CF, Soliman EP, Nogueira de Sá LA, Rodrigues Barbosa L, Ribeiro Dias TK, Ferreira-Filho PJ, Rodrigues Oliveria RJ (2010) Bronze bug *Thaumastocoris peregrinus* Carpintero & Dellapé on *Eucalyptus* in Brazil and its distribution. *Journal of Plant Protection Research* **50(2)**, 184-188.

EPPO RS 2012/147 Panel review date

Entry date 2012-07

### 2012/148 Swiss interception of *Anoplophora glabripennis* on wood packaging material from China

The NPPO of Switzerland recently informed the EPPO Secretariat of an interception of wood packaging material originating from China, from which adults of *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 List) were able to emerge. The presence of the insect was detected on 2012-05-21 by 2 sniffer dogs (Austrian team) on a consignment of granite stones at the Rhine port of Basel (Birsfelden). Although the wood packaging material was marked in conformity with ISPM no. 15, 5 larvae and 2 pupae were found. In addition, there was evidence that 2 more pupae had been able to hatch (adult beetles were not found). The identity of the larvae is still under verification, but their morphological characteristics strongly suggest that the species is *A. glabripennis*. The consignment of granite was repacked and the original packing material was incinerated. Because of the vicinity of the German border (right bank of the Rhine), the map of the demarcated area together with other relevant information will be provided to the German NPPO. Finally, the Swiss NPPO is developing a contingency plan for this pest.

The pest status of *Anoplophora glabripennis* in Switzerland is officially declared as: **Transient, under eradication.** 

**Source:** NPPO of Switzerland (2012-05).

Additional key words: interception Computer codes: ANOLGL, CH

#### 2012/149 Quarantine lists of Uzbekistan (2008)

Pests included on the quarantine lists of Uzbekistan (2008) are listed below. This information will be entered into the EPPO database on regulated pests (PQR) in due course.

#### A1 List (pests absent from Uzbekistan)

**Insects and mites** 

Aceria sheldoni

Agrilus mali

Aleurocanthus woglumi

Aleurothrixus floccosus

Aonidiella aurantii

Bactrocera dorsalis

Bactrocera minax (Tetradacus citri)

Bruchidius incarnatus

Callosobruchus chinensis

Callosobruchus phaseoli

Carposina niponensis

Caryedon serratus (C. gonagra)

Caulophilus latinasus

Ceratitis capitata

Ceratitis rosa

Ceroplastes japonicus

Ceroplastes rusci

Chionaspis furfura

Coccus perlatus (Mesolecanium deltae)

Diabrotica virgifera virgifera

Diaphorina citri

Dinoderus bifoveolatus

Dysmicoccus wistariae

Hyphantria cunea

Icerya purchasi

Keiferia (Phthorimaea) lycopersicella

Lindingaspis (Chrysomphalus) rossi

Liriomyza trifolii

Lopholeucaspis japonica

Naupactus (Pantomorus) leucoloma

Nipaecoccus nipae

Numonia pyrivorella

Paralipsa gularis

Pectinophora gossypiella

Phthorimaea operculella

Pinnaspis strachani

Popillia japonica

Pseudaulacaspis pentagona

Pseudococcus calceolariae (P. gahani)

Pseudococcus citriculus

Pseudoparlatoria parlatorioides

Rhagoletis pomonella

Rhizoecus kondonis

Sinoxylon conigerum

Spodoptera eridania

Spodoptera frugiperda

Spodoptera littoralis

Spodoptera litura

Tecia solanivora (Scrobipalpopsis solanivora)

Trogoderma angustum

Trogoderma ballfinchae

Trogoderma grassmani

Trogoderma longisetosum

Trogoderma ornatum

Trogoderma simplex

Trogoderma sternale

Unaspis citri

Unaspis yanonensis

Viteus vitifoliae

Zabrotes subfasciatus

#### Fungi

Cercospora kikuchii

Cochliobolus heterostropus (Drechslera maydis)

Cryptosporella (Phomopsis) viticola

Diaporthe helianthi

Diaporthe phaseolorum

Glomerella gossypii

Mycosphaerella (Didymella) chrysanthemi

Mycosphaerella linicola

Phialophora cinerescens

Phoma andigena

Phymatotrichopsis omnivora

Puccinia horiana

Stenocarpella macrospora

Synchytrium endobioticum

Thecaphora solani

Tilletia indica

#### **Nematodes**

Globodera pallida

Globodera rostochiensis

Nacobbus aberrans

Radopholus similis

#### Bacteria and phytoplasmas

Burkholderia (Pseudomonas) caryophylli

Erwinia amylovora

Grapevine flavescence dorée phytoplasma

Pantoea stewartii

Rathayibacter (Corynebacterium) tritici

Xanthomonas citri pv. citri

Xanthomonas hyacinthi

Xanthomonas oryzae pv. oryzicola

Xanthomonas oryzae pv. oryzae

Xylophilus ampelinus

#### **Viruses**

American plum line pattern virus
Andean potato mottle virus and Andean potato latent virus
Barley stripe mosaic virus
Chrysanthemum stunt viroid
Citrus tristeza virus
Peach mosaic virus
Plum pox virus
Potato yellow vein virus
Potato yellow dwarf virus

#### Weeds

Rose wilt disease

Acanthospermum hispidum
Aeschynomene indica
Aeschynomene virginica
Ambrosia psilostachya
Ambrosia trifida
Arceuthobium spp.
Bidens chilensis (B. bipinnata)
Cassia occidentalis

Cassia tora Cenchrus incertus (C. pauciflorus)

Croton capitatus Diodia teres

Emex australis

Emex spinosa

Euphorbia dentata

Euphorbia marginata

Helianthus californicus

Helianthus ciliaris

Helianthus lenticularis

Helianthus petiolaris

Helianthus rigidus (H. scaberrimus)

Hydrocotyle ranunculoides

Ipomoea hederacea

Iva axillaris

Jacquemontia tamnifolia

Oenothera (Raimannia) laciniata

Persicaria pensylvanica (Polygonum pensylvanicum)

Sesbania herbacea (S. exaltata, S. macrocarpa)

Sicyos angulatus

Sida spinosa

Solanum carolinense

Solanum elaeagnifolium

Solanum rostratum

Solanum triflorum

Striga spp.

#### A2 List (pests of limited distribution in Uzbekistan)

Insects

Dialeurodes citri Grapholitha molesta Leptinotarsa decemlineata Phyllocnistis citrella Pseudococcus comstocki Quadraspidiotus perniciosus Trogoderma granarium

#### Weeds

Acroptilon repens Ambrosia artemisiifolia Cuscuta spp.

**Source:** EPPO Secretariat (2012-07).

Additional key words: quarantine list Computer codes: UZ

#### 2012/150 A new web-based tool to spread information on pests and diseases

A new tool (scoop.it) that enables the production of e-magazines is currently being tested by the EPPO Secretariat as a pilot project. The following e-magazines concern pests and diseases in general (some e-magazines concern more particularly invasive alien plants, see EPPO RS 2012/159 in this issue) and can be viewed freely from the Internet:

- Pest Alerts: http://www.scoop.it/t/pest-alerts
- Pest Risk Analysis: http://www.scoop.it/t/pest-risk-analysis
- Diagnostic activities for plant pests: http://www.scoop.it/t/diagnostic-for-pests
- Pests on video: http://www.scoop.it/t/pests-on-videos
- Communication and citizen sciences on pests and invasive alien species: <a href="http://www.scoop.it/t/communication-and-citizen-sciences-on-pests-and-invasive-alien-species">http://www.scoop.it/t/communication-and-citizen-sciences-on-pests-and-invasive-alien-species</a>

Readers of the Reporting Service are encouraged to consult these pages and to become followers.

**Source:** EPPO Secretariat (2012-07).

### 2012/151 Eradication programme against Cylindropuntia rosea on the shores of Salagou lake (FR)

Cylindropuntia rosea (Cactaceae) originates from Mexico and Arizona and can be 1.5 m high and 3 m wide. Segments are cylindrical, greenish-grey with numerous spines, and fall apart very easily to form new individuals. Flowers are pink, 5 cm wide with yellow anthers and stamens. The species competes with other plants for water and nutrients, and its spines make the movement of wild fauna, livestock and people dangerous. This species is present and regulated as an invasive alien plant in South Africa and in Australia. Within the EPPO region it is only recorded in the wild in France and Spain.

C. rosea was first recorded in 2006 in the wild in the South of France in Celles, on the Salagou lake shores (Hérault department). In the municipality of Celles (locality 'le Cébérou'), 4 populations of 2000 m² were observed. In 2008, the local authorities (Conseil Général de l'Hérault, Syndicat Mixte de Gestion du Salagou, Celles municipality) as well as the Conservatoire Botanique National Méditerranéen, and the Office National de la Chasse et de la Faune Sauvage jointly decided to undertake an eradication programme against C. rosea. In 2009, the plant was removed mechanically (with a mechanical digger) and manually (when the area was not accessible to machinery). All removed plant material was buried on the site at a depth of about 2 m, depth at which the species cannot germinate or regenerate vegetatively. This removal action took 5 days, spread over April and May. All tools and machinery used were carefully cleaned in order to avoid any further spread of the plant. For a period of several years, this site will be monitored annualy in order to remove any new findings of C. rosea.

#### Source:

2012/152

Conservatoire Botanique National Méditerranéen de Porquerolles (2012) Un cactus éradiqué sur les berges du Salagou. Espèces Végétales Exotiques Envahissantes en Languedoc-Roussillon et Provence-Alpes-Côte d'Azur <a href="http://www.invmed.fr/print/166">http://www.invmed.fr/print/166</a>

Petermann A (Undated) Projet d'éradication d'*Opuntia rosea* (= *Cylindropuntia rosea*) sur la commune de Celles dans l'Hérault (34). Conservatoire Botanique National Méditerranéen de Porquerolles, 4 pp. <a href="http://enplr.validation.kaliop.net/IMG/pdf/2.\_Dossier\_Celles2.pdf">http://enplr.validation.kaliop.net/IMG/pdf/2.\_Dossier\_Celles2.pdf</a>

Computer codes: OPURS, FR

Additional key words: invasive alien plants, eradication

Following the first record of the invasive alien aquatic plant *Lagarosiphon major* (Hydrocharitaceae, EPPO List of Invasive Alien Plants) in the Salagou lake (Hérault department, Southern France) by the association 'Mattoral', manual removal experiments of this species took place in November 2010. In 2011, wider management measures were undertaken, with a budget of 15 000 EUR, but as the species was then present along all the lake shores at a depth of 0 to 5 meters, eradication was no longer considered feasible.

Management of Lagarosiphon major in the Salagou lake (FR)

The Hérault department is now coordinating the management of *L. major*, aiming to:

- Acquire better knowledge of the species, its biology and its impacts;
- Map the distribution and density of the species in the Salagou lake;
- Identify short and medium term management measures.

A budget of 18 750 EUR has been made available for the tasks quoted above, and further studies and actions shall be undertaken with a budget of 25 100 EUR.

#### **EPPO Reporting Service** – *Invasive Plants*

Computer codes: LGAMA, FR

Source: Conseil Général de l'Hérault (2011) Réunion de la Commission Permanente. Lundi 12

décembre 2011. RAA n° 29 - Exercice 2011. 89 p. http://www.herault.fr/files/avigne/RAA\_029.pdf

Pictures can be viewed in the EPPO Gallery:

http://photos.eppo.org/index.php/image/6586-lgama-04

Additional key words: invasive alien plants, management

#### 2012/153 First report of *Egeria densa* in the Guadalquivir watershed (ES)

Egeria densa (Hydrocharitaceae, EPPO List of IAP) originates from South America and has previously been recorded in the following EPPO countries where it is considered invasive: Belgium, France, Germany, Hungary, Italy, the Netherlands, Russia, Spain, Switzerland, Turkey and the United Kingdom.

In Spain, the species has been present since 1912 in the Parque del Retiro in Madrid where it was initially mistaken to be *Elodea canadensis*. It is also present in Andalucía (recorded in Sevilla in 2004), Comunidad Valenciana (recorded in Valencia), Galicia, and País Vasco.

In 2008, *E. densa* was found in the province of Sevilla (municipality of El Castillo de las Guardas), covering almost the entire surface of a reservoir belonging to the watershed of the Guadalquivir river, and occupying a surface of 14 ha. The plants were observed in flower, and all the observed flowers were male.

Source: Gros V, Casero-Montes Z, Pérez-Santigosa N, Plazuelo Á (2009) Primera cita de

Egeria densa Planchon (Hydrocharitaceae) en la cuenca hidrográfica del

Guadalquivir. Acta Botanica Malacitana 34, 273-275.

Additional key words: invasive alien plants, new record Computer codes: ELDDE, ES

#### 2012/154 First report of Colocasia esculenta in the wild in mainland Spain

Colocasia esculenta (Araceae) is an emergent, perennial, aquatic and semi-aquatic herbaceous species native to Asia (Myanmar, Bangladesh). It thrives in freshwater wetlands, as well as in dry lowland environments, and is usually found in tropical areas. It is consummed as a root vegetable (taro) in Africa, Asia, Oceania and tropical America and is also used as an ornamental plant. The species reproduces very easily vegetatively through corm crowns and cormels, while reproduction by seed is rare.

In some wetlands in South-East USA (Florida, Texas), Hawaii and Australia, *C. esculenta* has exhibited invasive behavior, altering the vegetation composition, structure and dynamics. Within the EPPO region, the species is recorded as present in the wild in Islas Canárias (ES), Azores and Madeira (PT). *C. esculenta* was recently found in the province of Sevilla in southern Spain where it formed several monospecific patches along the Hornillo stream course and shores, growing in full sun as well as in the shade. In total, an effective area of 1600 m² was covered. The species is thought to have escaped from a garden upstream.

This record highlights the ability of this tropical species to withstand the long dry summers of the Mediterranean climate within permanent streams. Although the invasive potential of *C. esculenta* remains uncertain, this species could usefully be monitored.

#### **EPPO Reporting Service** – *Invasive Plants*

Computer codes: CSXES, ES

**Source:** DAISIE Database - Colocasia esculenta

http://www.europe-aliens.org/speciesFactsheet.do?speciesId=972#

García-de-Lomas J, Dana ED, Ceballos G (2012) First report of an invading population of *Colocasia esculenta* (L.) Schott in the Iberian Peninsula. *BioInvasions* 

Records 1(2), 139-143.

Additional key words: invasive alien plants, new record

#### 2012/155 A LIFE project to manage Baccharis halimifolia in the País Vasco (ES)

Estuaries are highly important ecological enclaves. Invasive alien species represent a major threat to these habitats by displacing the indigenous species that are often already threatened species, and by causing detrimental changes to environmental conditions.

The problems caused by *Baccharis halimifolia* (Asteraceae, EPPO List of IAP) are studied by the LIFE project 'Restoration of habitats of community interest in estuaries in the Basque Country'. Within this project, actions are developed in three areas of the Natura 2000 Network (Urdaibai, Txingudi and Lea River). The aim is to restore a total area of 314 hectares and to improve conditions for the bird species living in the estuaries.

The project is coordinated by the Basque Government and is due to end in 2014. Summary reports, management plan, results of scientific monitoring, and other documents are available from the website of the project (in Spanish).

Source: Website of the LIFE project 08NAT/E/000055: Restoration of habitats of Community

interest in estuaries of the Basque Country.

http://www.ingurumena.ejgv.euskadi.net/r49-life55/en/

Additional key words: invasive alien plants, management, habitats

Computer codes: BACHA, ES

### 2012/156 Code of practice on non-native species approved by the Scottish Government

The Parliament of the Scottish Government approved the Code of practice on non-native species on the 28<sup>th</sup> of June 2012, and this Code came into effect on the 2<sup>nd</sup> of July 2012. Such approval has been done according to the process set out in the Wildlife and Countryside Act 1981, on the 21<sup>st</sup> of May 2012.

Source: The Scottish Government Website - Code of practice on non-native species

http://www.scotland.gov.uk/Topics/Environment/Wildlife-

Habitats/InvasiveSpecies/legislation/CodeofPracticeonNonNativeSpecies

Additional key words: invasive alien plants, Code of conduct Computer codes: GB

#### 2012/157 The economic cost of invasive alien species in Great Britain

The impact of invasive alien species can be manifold, ranging from loss of crops, damaged buildings, and additional production costs to the loss of livelihoods and ecosystem services. As detail in many cost estimates is lacking and as the impact on different sectors is largely unknown, research was carried out in Great Britain to estimate the current annual cost of invasive alien species (IAS) on the British economy. References related to over 500 nonnative species were gathered from the scientific and grey literature as well as from the internet. A detailed questionnaire was sent to key organizations to gather initial information.

The total current annual cost of IAS to the British economy is estimated at 1 291 461 000 GBP in England, 244 736000 in Scotland and 125 118 000 in Wales. The total annual cost of IAS to the British economy is therefore estimated to be approximately 1.7 billion GBP (2.16 billion EUR). Among all species groups, plants represent the highest annual costs with 483 030 000 GBP (approximately 612 600 000 EUR).

The annual costs of some individual invasive alien plants on the British economy had been estimated as follows:

Species	Cost (in GBP)	in EUR
Fallopia japonica (Polygonaceae, EPPO List of IAP)	165 609 000	210 045 000
Hydrocotyle ranunculoides (Apiaceae, EPPO A2 List)	25 467 000	32 300 000
Rhododendron ponticum (Ericaceae)	8 621 000	10 900 000
Heracleum mantegazzianum (Apiaceae, EPPO List of IAP)	2 362 000	2 900 000
Impatiens glandulifera (Balsaminaceae, EPPO List of IAP)	1 000 000	1 300 000
Buddleia davidii (Scrophulariaceae, EPPO List of IAP)	961 000	1 200 000

Impacts and costs are estimated by sectors, some are detailed below:

Agriculture and horticulture: Bromus spp. and in particular Bromus sterilis (Poaceae) are important weeds in British cereals and leguminous crops, causing cereal yield losses up to 45%. Avena fatua and Lolium perenne (Poaceae) are also weeds in cereals, and Veronica persica (Plantaginaceae) is an important grain contaminant.

<u>Forestry</u>: *Rhododendron ponticum* (Ericaceae) is suspected to be present over 826 998 ha in Great Britain.

<u>Tourism and recreation</u>: the species considered to be a threat to fishing (angling) are *Azolla filiculoides* (Salviniaceae), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Hydrocotyle ranunculoides*, *Elodea canadensis* (Hydrocharitaceae), *E. nuttallii* (Hydrocharitaceae, EPPO List of IAP), *Fallopia japonica*, *Lagarosiphon major* (Hydrocharitaceae, EPPO List of IAP) and *Myriophyllum aquaticum* (Haloragaceae, EPPO List of IAP). The total annual cost estimated for angling is 1 365 084 GBP (1 700 000 EUR).

For recreational boating, expenditure is made for the control of *H. ranunculoides*, *H. mantegazzianum* and *I. glandulifera*, as well as of *Elodea* spp., and *Lagarosiphon major*. The management of these aquatic species is estimated to amount to 29 862 650 GBP (37 800 000 EUR) annually.

<u>Construction</u>, <u>development and infrastructure</u>: the main species causing additional costs to the construction industry is *F. japonica*, and this species also reduces the value of housing and land for housing. Plants such as *I. glandulifera* and *H. mantegazzianum* cause delays to development projects. In addition, the total cost of *B. davidii* to infrastructures is estimated at 960 430 GBP (1 200 000 EUR).

<u>Transport</u>: F. japonica is a major concern for road management, as is H. mantegazzianum, I. glandulifera and B. davidii.

#### **EPPO Reporting Service** – *Invasive Plants*

This study demonstrated the benefits of intervention at an early stage, as well as long-term cost savings, if eradication is undertaken early in the invasion process.

Source:

Williams F, Eschen R, Harris A, Djeddour D, Pratt C, Shaw RS, Varia S, Lamontagne-Godwin J, Thomas SE, Murphy ST (2010) The economic cost of invasive non-native species on Great Britain. CABI, Wallingford (GB), 199 pp.

http://bit.ly/GBCostNNS

Additional key words: Invasive alien plants, costs

Computer codes: AVEFA, AZOFI, BROST, BUDDA, CSBHE, ELDCA, ELDNU, HERMZ, HYDRA, IPAGL, LGAMA, LOLPE, POLCU, MYPBR, RHOPO, VERPE, GB

## 2012/158 Publication of the proceedings of the 25<sup>th</sup> German Conference on Weed Biology and Weed Control

The proceedings of the 25<sup>th</sup> German Conference on Weed Biology and Weed Control held on 2012-03-13/15 in Braunschweig (DE) have been published and can be downloaded from the website of the Conference: http://www.unkrauttagung.de/index.php?id=1

Source:

Nordmeyer H & Ulber L (Eds.) (2012) Proceedings 25<sup>th</sup> German Conference on Weed Biology and Weed Control. March 13-15, 2012, Braunschweig, Germany. *Julius-Kühn-Archiv* 1, 1-416.

Additional key words: invasive alien plants, publication

Computer codes: DE

#### 2012/159 A new web-based tool to spread information on invasive alien plants

A new tool (scoop.it) that enables the production of e-magazines is currently being tested by the EPPO Secretariat as a pilot project (see also EPPO RS 2012/150 in this issue). The following e-magazines concern more particularly invasive alien plants and can be viewed freely from the Internet:

- Invasive Alien Plants http://www.scoop.it/t/invasive-alien-plants
- Pest Risk Analysis: http://www.scoop.it/t/pest-risk-analysis
- Communication and citizen sciences on pests and invasive alien species:
   http://www.scoop.it/t/communication-and-citizen-sciences-on-pests-and-invasive-alien-species

Readers of the Reporting Service are encouraged to consult these pages and to become followers.

**Source:** EPPO Secretariat (2012-07).